Investigations in Topdrops

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Topdrops, a mapping of permutations first introduced by John Horton Conway, is examined. Topdrops has so far been under-researched compared to the similar topswops variant. A proof that the topdrops mapping is bijective is provided. Various orbits are produced when the mapping is applied repeatedly. Three proofs about the numbers of orbits of small sizes are stated. Observational data on the numbers of orbits of larger sizes are also provided. In addition, several observations are provided that suggest further avenues of research for this largely unexplored problem.

Awards Won:
Third Award of $1,000
American Mathematical Society: Certificate of Honorable Mention